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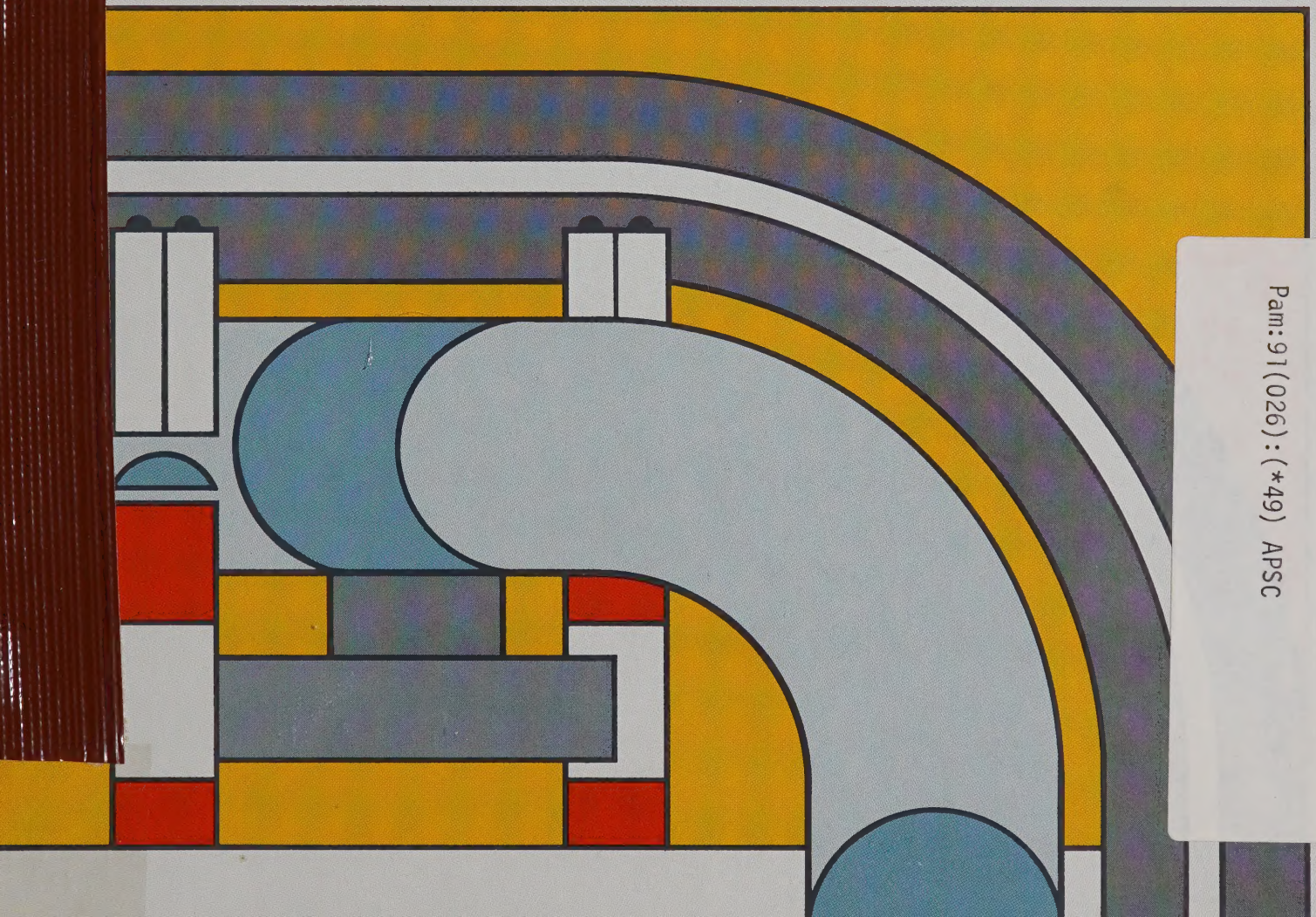
PIPELINE DRIVE

A Roadside Guide to the trans Alaska Pipeline. 63



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About this booklet.

The trans Alaska pipeline extends nearly 800 miles, from Prudhoe Bay on the Arctic Ocean to Valdez on Prince William Sound.

From the Yukon River south to its terminus, portions of the line are visible to motorists. This guide is designed to assist the highway traveler in identifying salient features of the southern part of the line.

Although the oil flows through the pipeline southward from Prudhoe Bay to Valdez, this guide is arranged in the reverse direction for ease of use. Most motorists will either approach the line from the south, or intersect

it between the communities of Glennallen and Fairbanks. Because of the pipeline's great length, it is impossible to identify all points of interest, or all points from which the line or related facilities are visible. For more specific details, you may wish to use this guide in conjunction with one of the well-known commercial Alaska highway guidebooks.

Mileage figures are posted on small signs, called Mileposts (MP), located at one-mile intervals along the highways mentioned in this guide. The Mileposts will be on the right side of the road as you travel north, and appear in various colors, including green, white, and silver. Milepost signs are officially placed by the State of Alaska, and are regarded as accurate mileage guides. They provide excellent reference points in such open country, where street names and numbers, and other precise landmarks, are absent, and even intersections are few.

Mileposts may be missing at some points along the highways, where they may have been removed during highway improvements. In such areas, you may follow the guide by referring to your automobile trip meter or odometer.

For your safety, pull well off the roadway and leave your warning lights flashing when stopping for a better view. During winter months, make sure you carry basic survival gear at all times. And at any time, avoid close contact with wildlife. Small animals such as foxes may be rabid, while large ones, like bear or moose, can be downright lethal — particularly when their young are nearby.

Because the pipeline is usually fairly distant from the roadway, photographers should have long-range lenses for best results.

We hope that you enjoy your tour of Alaska, and that this roadside guide will enhance your enjoyment of this portion of your trip.

Valdez to Fairbanks

The beginning of the road, for purposes of this guide, is the entrance to the Valdez Terminal of the trans Alaska pipeline.

Although, for security reasons, access to the Terminal by casual visitors is not permitted, organized bus tours of the facility are provided by a major tour company. (For more information, contact the Sheffield House in Valdez.) Motorists may, however, drive to the Terminal gate to begin this pipeline tour.

A view of some of the Terminal facilities is possible from this starting point. The area just to the right, as you face away from the Terminal gate, is the former site of old Fort Liscum, built by the U.S. Army, and abandoned in 1922. In 1928, the Alaska Road Commission salvaged some of the buildings. In 1974, the remaining buildings were removed to make way for construction of the Terminal.

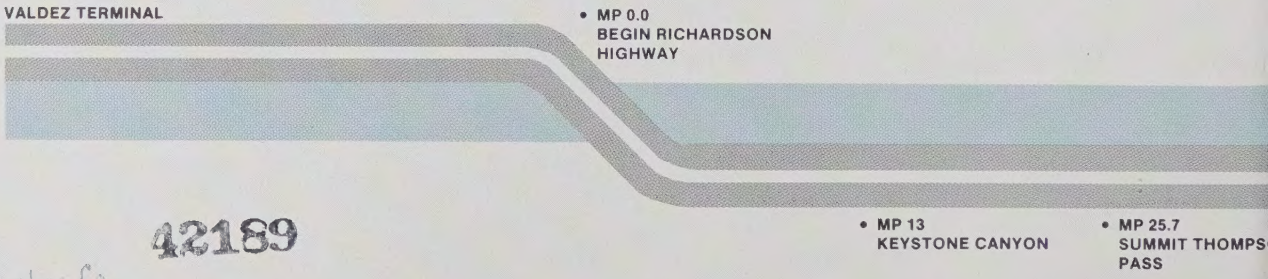
There are no mileposts along this short access road. However, proceeding 1.8 miles east along the road from the Terminal gate, you will arrive at Solomon Gulch, with its impressive cataract (a source of future hydroelectric power.) The pipeline is buried in this area, to the right (south) of the road, but is distant and mostly obscured from view.

Mileposts (MP) begin with Mile 0.0 at Old Valdez.

MP 2.9 The junction of the Terminal Road and the Richardson Highway. To follow the pipeline route, turn right in the direction of Glennallen, Delta Junction, and Fairbanks. (To the left, approximately 6 miles, is the City of Valdez, where all major services are available.)

You are now on the main highway from Valdez to Fairbanks. The Lowe River is visible immediately on the right for several miles, beginning at about MP 7.

MP 13 The entrance to Keystone Canyon — a spectacular, deep gorge, with the highway at the base of its steep walls. The pipeline is out of view high above the right-hand wall of the canyon. Captain W. R. Abercrombie named Keystone Canyon in 1898, presumably after his native Pennsylvania, the Keystone State. Look for Horsetail and Bridal Veil Falls.



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MP 20.5 The road begins to climb to Thompson Pass. The pipeline here ascends a steep slope to the left, climbing more than 1700 vertical feet in three giant steps. This was considered one of the three most difficult areas of pipeline construction. The pass also was named by Captain Abercrombie, for a Pennsylvania friend.

MP 25.7 The summit of Thompson Pass.

MP 28.7 Look for a road to a scenic viewpoint of Worthington Glacier.

MP 29 The pipeline ascends a steep grade on the left, near Worthington Glacier. Conventional methods of burying the line were used in areas like this, where permafrost (permanently frozen soil) is not present, or where such soils would remain stable even if thawed by the warm oil in the pipeline.

MP 36.9 The first of several buried pipeline crossings in this area, where the line crosses from the left to the right side of the road at the Tsaina River, and follows the ridge above the river. The revegetated backfill material over the buried line is occasionally visible near the road for the next several miles.

MP 63.9 The first section of elevated pipeline is visible on the right, after another crossing of the road. In areas of thaw-unstable soils, the pipeline is elevated above ground and insulated to prevent thawing of the ground below. Specially-designed above-ground supports, spaced about every 60 feet, permit necessary movement of the pipe due to temperature changes or ground movement. The line is alternately elevated and buried throughout its length, depending on soil conditions. In areas where the pipeline intersects wildlife migratory routes, special crossings have been designed to allow animals to pass over or under buried and elevated sections.

MP 64.7 The communications tower, tanks, and other structures of Pump Station 12 are visible on the right.

MP 66.2 Here the pipeline recrosses the road from right to left.

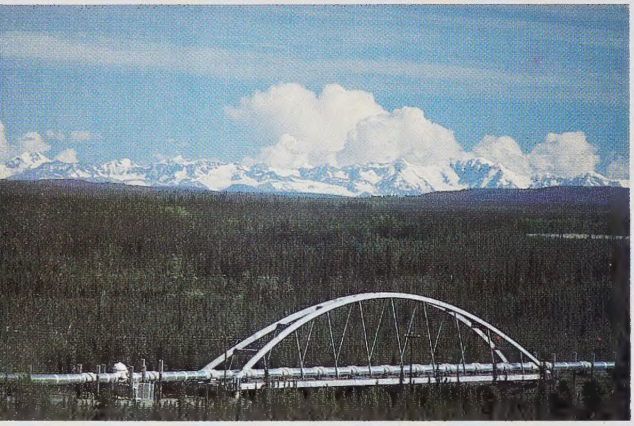
MP 69.8 The pipeline is elevated and visible on the left in the Little Tonsina River Valley.

MP 82.6 The Richardson Highway intersects with the Edgerton Highway. Continue north on the Richardson Highway to follow the pipeline route.

MP 88.5 The pipeline is close to the highway on the left, opposite Willow Lake. The line is buried, and the ground surface has been revegetated.

Worthington Glacier

• MP 28.7 WORTHINGTON GLACIER • MP 29 • MP 64.7 PUMP STATION 12 • MP 69.8 LITTLE TONSINA RIVER VALLEY • MP 82.6 MP 88.5 • WILLOW LAKE



MP 115 Glennallen. Two leaders of early exploration here in the Copper River region were Captain Edwin F. Glenn and Lieutenant Henry Tureman Allen. The community of Glennallen is named for both. At Glennallen, the Richardson Highway intersects with the Glenn Highway. To follow the pipeline route, continue on the Richardson Highway. (The Glenn Highway connects Glennallen with Anchorage, 189 miles to the west.)

MP 128.6 Gakona Junction is near the small community of Gakona. The Glenn Highway turns off to the right here. To follow the pipeline route, continue straight ahead on the Richardson Highway.

MP 147.2 The 400-foot-long, steel-arch pipeline bridge over the Gulkana River is visible for just a moment on the left, in the distance. The pipeline is visible only occasionally for the next several miles.

MP 155.3 The buried line crosses the road to the right.

MP 160.4 The elevated pipeline parallels the highway on the right, south of Paxson Lake. Both the lake and the community of Paxson were named after the proprietor of Paxson's roadhouse, which stood at the north end of the lake in about 1906. The pipeline, on the right, is within one to five miles of the highway for the next several miles.

MP 185.5 The Richardson Highway intersects with the Denali Highway. Continue straight ahead on the Richardson Highway. (The Denali Highway proceeds 135 miles to the George Parks Highway, a major route connecting Anchorage and Fairbanks.) The pipeline is alternately visible and obscured for the next several miles.

MP 191 An elevated portion of the line passes close to the highway on the right.

MP 197.6 The Richardson Monument. The Monument, the highway, a village, and a U.S. Army facility at Anchorage were all named for Major Wilds P. Richardson, first president of the Alaska Road Commission. Pipeline workers were housed at

Isabel Pass construction camp here. The Gulkana Glacier is visible in the background to the right. The Richardson Monument is at the summit of Isabel Pass, which separates the Delta and Gulkana River drainages.

MP 197.9 The buried pipeline crosses to the left of the highway.

MP 201.6 In elevated mode, the line climbs a ridge.

MP 204.3 The line reappears — still on the left — as a gravel berm, in buried mode. The line parallels the highway here for a few miles, on the gravel bed of an old channel of the Delta River.

MP 216 To the left, the pipeline crosses the Denali Fault, the only major "capable" geologic fault along the line. "Capable" in this context means that there is evidence of movement along the fault within the last 10,000 years. However, there has been no recorded movement along the fault in historic times. Special design permits as much as 20 feet of horizontal, and 5 feet of vertical, movement of the pipeline.

MP 219.2 Pump Station 10 is on the left side. In the next 36 miles, approximately, the pipeline crosses beneath the highway five times, but the line is mostly obscured from view.

MP 243.6 The line is visible in elevated mode on both sides of a buried road crossing, and is occasionally visible on the left for the next few miles. The prominent hill on the left is Donnelly Dome.

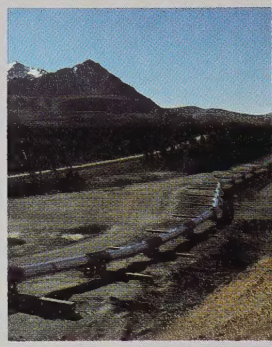
MP 258.1 Pump Station 9 is on the right.

MP 266 The Richardson Highway is joined from the right by the Alaska Highway at Delta Junction. Continue straight ahead. (The Alaska Highway leads to the international border with Canada, 200 miles to the Southeast.)

MP 275.3 The pipeline crosses the Tanana River on a suspension bridge. This is one of 13 bridges on which the line crosses larger rivers. It is buried beneath some 800 smaller streams and rivers, well below the deepest scour level of the water.

The pipeline is now in elevated mode, and for the next few miles is intermittently visible (but mostly obscured by trees) on the right. The line is then lost to view, and is scarcely evident to the motorist for approximately the next 100 miles, until well beyond Fairbanks — except briefly at about MP 327, where some of the structures of Pump Station 8 are visible to the careful viewer, high on the right in the distance. Look for the microwave communications tower.

MP 341 On the right is Eielson Air Force Base, named for famous early Alaskan aviator Carl Ben Eielson.



Denali Fault

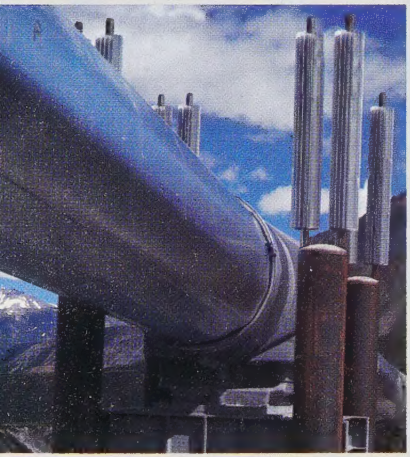
• **MP 219.2 PUMP STATION 10**

• **MP 258.1 PUMP STATION 9**

MP 275.3 • TANANA RIVER BRIDGE

MP 341 • EIELSON AIR FORCE BASE

MP 358.7 The entrance to Fort Wainwright, a U.S. Army facility, is to the right. The post is named for General Jonathon M. Wainwright, the hero of Bataan, who was captured with his troops on the island of Corregidor in WW II, and held in captivity until the end of the war.



MP 362 A major intersection on the outskirts of Fairbanks — the Richardson Highway and Airport Way. The main downtown area of Fairbanks, where hotels, restaurants, and other services are available, is to the northwest.

Fairbanks was founded almost accidentally by Tanana riverboat captain E.T. Barnette in 1901, when he decided to spend the winter on the site in hopes of finding gold in the spring. The gold was there, and a city sprang up. The new mining community was named for Senator Charles Fairbanks of Indiana (later to be Vice-President under Teddy Roosevelt.) Today, Fairbanks is Alaska's second-largest city, and unofficial capital of the Interior. Follow the directional signs to the downtown Tourist Information Center.

MP 0.0 The mileage journal for this portion of the roadside guide begins again at 0.0, and progresses northward to the Yukon. Your starting point is the junction of the Richardson Highway and Airport Way, on the eastern outskirts of Fairbanks. This is the same intersection described as MP 362, the final journal entry for the trip from Valdez to Fairbanks.

At the intersection, turn north onto the Steese Expressway — identified by a large sign — toward Fox. (This expressway becomes the Steese Highway, and continues 11.5 miles to Fox.) The pipeline passes about 8 miles to the east of Fairbanks, and is not visible along the first few miles of this highway.

MP 7.5 From this point there are two views of the line on the right, in both buried and elevated modes.

Apparent in the elevated mode is the zigzag configuration used in construction. This alignment contributes to the flexibility of the line, which accommodates expansion and contraction due to temperature changes or earth movement. Also apparent here are the finned radiators extending above the vertical members of the pipe supports. These are the external extensions of heat pipes inside the supports. In areas where soils are particularly sensitive to heat — the frozen-soil

• MP 358.7 FT. WAINWRIGHT

MP 0.0 • BEGIN STEESE EXPRESSWAY

PAVEMENT END
SEE CAUTIONARY NOT
INSIDE BACK COVE

• MP 7.5

temperatures being close to the thaw point — the heat pipes are installed. The heat pipes employ a working fluid to transfer heat from the ground by vaporization and condensation, within a closed system, to ensure that the soil remains frozen.

MP 11.5 The Elliott Highway intersects with the Steese Highway here. To follow the pipeline, continue north on the Elliott Highway. Mileposts begin again at 0.0.

MP 27.8 There is a roadside turnoff at the crest of the road on Wickersham Dome. The dome and a nearby creek were named by prospectors in honor of Judge James Wickersham, early Alaskan jurist and delegate to Congress in Alaska's Territorial days. The cleared pipeline route is visible from here for a long distance to the south, climbing over five ridges.

MP 32 The pipeline is clearly visible on the left. It is buried on the hillside to the north, and in elevated mode at the bottom of the hill.

MP 38.5 Again, look to the left for a view of the line. The pipeline route and the highway diverge for the next several miles.

MP 69.3 This is the site of the small community of Livengood. The town, a creek, and a mountain all take their names from Jay Livengood, who discovered gold in the creek in 1914.

MP 73.2 This is the junction at which you will turn to follow the pipeline construction road, built in 1969-70. This road was the first in Alaska to cross the Yukon River. Turn right to follow the pipeline route. (About a mile west beyond the junction is a service station where gas is available; the pipeline crosses this road near the service station.) Mileposts begin again at 0.0 at the junction.

• MP 0.0
BEGIN PIPELINE CONSTRUCTION RD.

• MP 0.0
BEGIN ELLIOTT HIGHWAY

• MP 27.8
WICKERSHAM DOME

• MP 38.5

• MP 73.2

MP 1.1 From here the pipeline is intermittently visible for the next few miles.

MP 24.5 For a few miles, the elevated pipeline is visible on the right at several locations.

MP 38.1 The pipeline crosses the road and remains on the left from this point nearly all the way to the Yukon River.

MP 53.2 The first view of the Yukon River. The pipeline is on the left. The site of a former pipeline construction camp — Five Mile Camp — is across the river.

MP 54 Pump Station 6 is located here. The microwave tower, and the stack of the station's small refinery, rise above the pump buildings and other structures. There is an excellent view of the Yukon River. The refinery — more properly called a topping plant — produces fuel from crude oil for operation of the turbine engines which drive the pumps. This topping plant, and similar ones at Pump Stations 8 and 10, provide fuel for all the stations south of the Brooks Mountain Range. Stations north of the Brooks Range use natural gas, transported from the Prudhoe Bay field in a small-diameter pipeline. The microwave tower is part of a communications network that links pump stations and other remote points with the Control Center at Valdez. A satellite backup system is also available.

MP 54.5 The pipeline crosses the road again, and appears on the right from here to the Yukon River.

MP 56 The south side of the Yukon River Bridge. The bridge was built by the State of Alaska, with the pipeline builders sharing in the cost. The pipeline is supported along the right side of the bridge, which was opened in October of 1976 to truck traffic only, in connection with pipeline construction.

MP 56.5 The north side of the bridge. This is the limit of northward travel for personal vehicles.

• MP 1.1

• MP 38.1

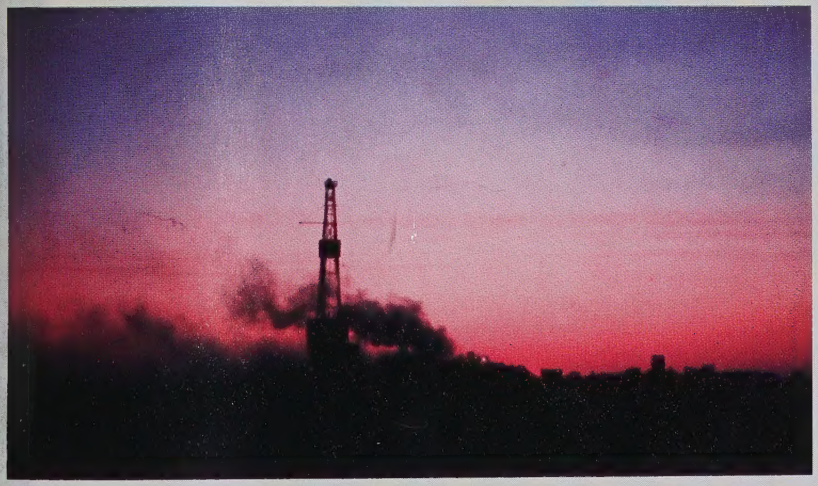
• MP 54
PUMP STATION 6

MP 56 •
YUKON RIVER BR

A word about access and road conditions beyond Fairbanks.

The public highway continues only about 150 miles beyond Fairbanks, to the bridge across the Yukon River. The road beyond, some 360 miles to the Arctic Ocean, was built by Alyeska Pipeline Service Company under an agreement with the State of Alaska. It has now been turned over to the State. Inquiries should be directed to the State of Alaska Department of Transportation and Public Facilities.

The highway is paved for only about 20 miles north of Fairbanks. The next 130 miles, to the Yukon River, is gravel-surfaced. It may be prudent to consult the Alaska Division of Highways about the condition of this portion of the road before proceeding.



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